```
public class TicTacToe {
    static char[][] board = {
        {''', ''', '''},
        { ' ', ' ', ' ', ' '},
        {'', ', '', ''}
    };
    public static void main(String[] args) {
        java.util.Scanner scanner = new java.util.Scanner(System.in);
        char currentPlayer = 'X';
       boolean gameEnded = false;
       while (!gameEnded) {
            printBoard();
             System.out.println("Player " + currentPlayer + ", enter your move (row and
column): ");
            int row = scanner.nextInt();
            int col = scanner.nextInt();
            if (row < 0 || row > 2 || col < 0 || col > 2 || board[row][col] != ' ') {
                System.out.println("This move is not valid");
            } else {
                board[row][col] = currentPlayer;
                gameEnded = hasWon(currentPlayer);
                if (gameEnded) {
                    printBoard();
                    System.out.println("Player " + currentPlayer + " wins!");
                } else if (isBoardFull()) {
                    printBoard();
                    System.out.println("The game is a tie!");
                    gameEnded = true;
                } else {
                    currentPlayer = (currentPlayer == 'X') ? '0' : 'X';
            }
        }
        scanner.close();
    }
    public static void printBoard() {
        System.out.println("----");
        for (int i = 0; i < 3; i++) {
            System.out.print(" | ");
            for (int j = 0; j < 3; j++) {
                System.out.print(board[i][j] + " | ");
            System.out.println();
            System.out.println("----");
        }
    }
   public static boolean hasWon(char player) {
        for (int i = 0; i < 3; i++) {
```

```
if (board[i][0] == player \&\& board[i][1] == player \&\& board[i][2] == player)
            return true;
        if (board[0][i] == player && board[1][i] == player && board[2][i] == player)
            return true;
    }
    if (board[0][0] == player \&\& board[1][1] == player \&\& board[2][2] == player)
        return true;
    if (board[0][2] == player \&\& board[1][1] == player \&\& board[2][0] == player)
        return true;
    return false;
}
public static boolean isBoardFull() {
    for (int i = 0; i < 3; i++) {
        for (int j = 0; j < 3; j++) {
            if (board[i][j] == ' ') return false;
        }
    return true;
```

}